DOCUMENT RESUME

ED 215 505 EC 142 165

AUTHOR Isley, Ann, Comp.; Anthony, Eugene, Comp.
TITLE Visually Impaired Learners: A Handbook.
INSTITUTION North Carolina State Dept. of Public Instruction, Raleigh. Div. for Exceptional Children.
PUB DATE 81
NOTE 89p.

EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS Class Organization; Classroom Environment; Elementary Secondary Education; Guidance; Handwriting Skills; Instructional Materials; *Mainstreaming; Mathematics; Reading Instruction; School Counseling; Science Instruction; Student Characteristics; *Teaching Methods; *Visual Impairments; Visually Handicapped Mobility
IDENTIFIERS North Carolina

ABSTRACT

The booklet is intended for regular and special educators involved with visually impaired students in North Carolina local schools. Seven sections are devoted to the following topics (sample subtopics in parentheses): characteristics (low vision training, vision testing); classroom arrangement (seating location, lighting); materials (large print, braille, criteria for use); teaching strategies (tips for notetaking, lecturing, using charts and maps, math tips, reading suggestions, science tips, writing tips, use of typing, listening suggestions); special training (daily living skills, orientation and mobility, vocational training); additional instructional areas (suggestions for teaching physical education, industrial technology, home economics); and guidance and counseling. (CL)

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FOREWORD

Children and youth who are blind or partially sighted have opportunities to receive educational services in public day schools or in residential schools. The key factor in determining the most appropriate setting is the individual needs of the pupil.

This publication is intended to be a tool to assist general and special education teachers to manage the educational program for each individual pupil. It is our hope that by making this publication available we are moving another step closer toward consistent planning and programming for our pupils with visual impairments.

A. Craig Phillips
State Superintendent of Public Instruction

PREFACE

During the last decade a greater emphasis has been placed on educating handicapped children and youth in local public school settings. This publication was developed to help teachers, support personnel and administrators as they attempt to provide educational services to the visually impaired in local public school programs. We believe this one reference will reduce the amount of time used in searching for information on serving this segment of our school population.

The sections in this publication include:

- an introduction to who the visually impaired are, including the state's definitions;
- physical arrangements for the classroom to accommodate the needs of the visually impaired;
- special materials and equipment needed;
- special teaching tips for the curriculum areas;
- orientation and mobility training;
- a listing of agencies which provide services to the visually impaired; and
- forms used by public school programs in North Carolina.

We are grateful for the opportunity to develop this publication for the use of school personnel in North Carolina, as they attempt to provide full and appropriate services to our visually impaired learners.

George A. Kahdy

George A. Kahdy, Assistant Superintendent
Instructional Services Area

Theodore R. Drain

Theodore R. Drain, Director
Division for Exceptional Children

ACKNOWLEDGEMENTS

Appreciation is expressed to the following persons who worked with the Division for Exceptional Children to study the needs for this publication: Naia Ward, Charlotte/Mecklenburg Schools; Mildred Wood, Wake County Schools; Polly Grimes, The Governor Morehead School; Pat Thompson, Consumer and Advocacy Committee for the Blind; and to Ruth Murphy, Jan Williams, Edward Matthews and Benjamine Thomas, Divison of Services for the Blind.

Recognition is also given to the many North Carolina teachers, administrators and parents who have given input into the development of this publication. Their support and interest in this effort have been appreciated.

A special expression of thanks goes to the Ohio Department of Education, Division of Special Education, and to Julie Todd, Director of the Ohio Resource Center for Low Incidence and Severely Handicapped. Their kind permission was given to use their recently published handbook Visually Impaired Students in the Regular Classroom: A Resource Book as a model for this publication. Much valuable information was obtained from that work.

Appreciation is also given to Ann Isley of the staff of the Division for Exceptional Children, and to Eugene Anthony formerly of the staff, for their efforts in compiling this publication; to Barbara Conner and David Mills of the Divison for Exceptional Children for their editing; and to Carolyn Gregory of the Division for Exceptional Children for her typing.

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WHAT NEEDS TO BE KNOWN ABOUT VISUALLY IMPAIRED STUDENTS AND HOW THEY SEE?

WHAT DO YOU THINK?
WHO ARE VISUALLY IMPAIRED STUDENTS?
HOW DO WE FIND OUT HOW MUCH THE STUDENT SEES?
WHAT SHOULD WE LOOK FOR?
WHAT IS LOW VISION TRAINING?
SPECIAL NEEDS PROFILE

WHAT DO YOU THINK?

Some impressions we have about visually impaired people are ideas we have heard but not thought about . . .

How many of your ideas are myths and how many are facts?

1) Blind people hear better than sighted people. TRUE FALSE

2) It hurts the eyes to hold a book too close to them. TRUE FALSE

3) Visually inpaired people will lose their vision by using their eyes too much. TRUE FALSE

4) They need bright light to see better. TRUE FALSE

5) One "bad" eye means that the person has lost half of her/his sight. TRUE FALSE

6) All visually impaired people need glasses. TRUE FALSE

7) Blind people see black. TRUE FALSE

ANSWERS:

1) FALSE. Visually impaired people need to be trained to make maximal use of their listening skills. They cannot hear better simply because they cannot see well.
2) FALSE. A visually impaired person may hold a book close to her/his eyes in order to see the print better. This technique is not harmful to the eyes.
3) FALSE. Unless there is a medical prescription to the contrary, the visually impaired person should be encouraged to use her/his vision.
4) FALSE. Depending upon the student, s/he may need bright or dim lighting.
5) FALSE. Losing vision in one eye affects depth perception and visual field, but usually does not affect other aspects of vision.
6) FALSE. Glasses do not always correct vision. The visually impaired person may wear glasses for some tasks and not for others.
7) FALSE. Blind persons see varying degrees of lightness and darkness depending upon the visual impairment.

WHO ARE VISUALLY IMPAIRED STUDENTS?

INTRODUCTION

In order to qualify for a program for the visually impaired, federal and state statutes and regulations require that specific procedures and definitions be used in determining eligibility. It is the responsibility of each local education agency to develop eligibility procedures consistent with federal and state requirements.

Those with severe visual impairments will usually be identified before they enter public school, with corrective measures provided prior to school enrollment. Students with less severe difficulties may not be identified until they encounter learning difficulties caused by the visual impairment. For this reason, all local education agencies should provide periodic screening for all students. Through screening, those having visual difficulties requiring only minor corrections, as well as those needing specialized instructional services, should be identified.

Screening is that process by which a rapid assessment is made of a given population to identify students with suspected visual impairments. An in-depth evaluation by an optometrist or an ophthalmologist is necessary for those identified through the screening process. This evaluation is required for labeling the pupil and is crucial for providing an appropriate educational program.

DEFINITION OF VISUALLY IMPAIRED

The term visually impaired is a generic term that includes both the blind and the partially sighted.

Functionally blind children are those who have so little remaining vision that they must use Braille as their reading medium.

Partially seeing children are those who have a loss of vision, but are able to use regular or large type as their reading medium. These will generally be children who have a visual acuity between 20/70 and 20/200 in the better eye after correction.

Children who are legally blind are those who have a visual acuity of 20/200 or less in the better eye after correction or a peripheral field so contracted that the widest diameter subtends an arc no greater than 20 degrees.

REQUIRED AND RECOMMENDED SCREENING/EVALUATION

Required screening and evaluation before placement includes hearing screening and opthalmological or optometric evaluation.

Recommended screening and evaluation before placement includes medical evaluation, psychological evaluation, educational evaluation, adaptive behavior evaluation, speech/language evaluation, and audiological evaluation.

FUNCTIONAL VISION

How a child uses vision (functional vision) is the most important consideration for the classroom teacher. Educationally, visually impaired students can be grouped in these ways:

Those who:

- read standard print
- use magnification devices with standard print
- read large print
- read a combination of large print/regular print
- use magnification devices with large print
- use braille but can see light (useful for mobility)
- use braille but have no light perception

The technical definition (based on visual acuity) is still used to qualify visually impaired individuals for special services, such as special education, tax exemptions, free mailing privileges, and special materials from the Library of Congress.

How Do We Find Out How Much The Student Sees?

You have many questions to answer. The answers may come from a variety of sources depending upon the student, the severity of the visual impairment, and your background and expertise in the area of vision.

OBSERVE	ASK	EXPERIMENT
. Can the student read the chalkboard from the seat or does s/he need to walk up to it? . Does s/he squint when reading a book? . Does visual functioning vary in different situations - on the playground, in reading group, at the desk? . See chart on next page for more questions.	. Read the Cumulative Record - Is there any information about physical restrictions, medication, or the need for vision aids (magnifiers, lamps, etc.) . Ask the Parents - Does the student like to watch T.V.? Where does s/he sit - close or far away? . Ask the student what s/he sees outside the window, in the picture, in the book, on the board, etc.	. Try Different Lighting - Is dim light or bright light better? . Try Different Seating - Does s/he respond better if close or far away from the board or a presentation. . Try Different Ideas - How does s/he do when lessons are taped? (See section on Teaching Tips)

When you have tried these techniques and considered or completed the items listed on the next page ("What Should We Look For . . . ?), then . . .

1) Look at the Special Needs Profile on page 7.

2) Refer to the appropriate sections.

3) Study the information in the specified sections.

4) Call the Division for Exceptional Children for technical assistance.

What Should We Look For?

This checklist will help you determine how students use their eyes/vision. Use this information to assist you in programming appropriately for the student.

1) HOW DO THE EYES LOOK?

- [ ] Are eyes red, irritated?
- [ ] Is there a crustiness on eyelids and in corners?
- [ ] Does eye look "misty" or clouded?
- [ ] Does child rub eyes frequently?
- [ ] Do eyes tear often?

2) HOW ARE THE EYES USED?

- [ ] Does child seem to use one eye more than the other?
- [ ] Does one eye or both turn in, up or out?
- [ ] Does child seem to use both eyes together?
- [ ] When child looks at moving object, is eye movement separate from head movement?
- [ ] Does child squint, strain facial muscles, or cover one eye?
- [ ] Does child complain of seeing double?
- [ ] Does child need finger or marker to keep place?
- [ ] Does child omit "small" words when reading?
- [ ] Does child preread or skip lines unknowingly?
- [ ] Does child place drawings poorly on page?

3) HOW IS THE CHILD'S VISION-RELATED BEHAVIOR?

- [ ] Does child stare at lights (light gaze)?
- [ ] Does child move objects between light source and eyes to produce light flashes (light flick)?

4) HOW IS THE CHILD'S POSTURE?

- [ ] Is there a head tilt? Which way?
- [ ] Is there a head turn? Which way?
- [ ] In what position does a child seem most comfortable to read? Is posture unusual?

5) HOW DOES THE CHILD MOVE?

- [ ] Is child rigid?
- [ ] Are movements smooth?
- [ ] Does child bump into objects?
- [ ] Does child bump into objects consistently on one side or above or below a certain body part?

6) HOW DOES THE CHILD INTERACT WITH THE ENVIRONMENT?

- [ ] How does child interact with the environment (tactually, olfactorily, etc.) ?
- [ ] Does child seem to look or bring objects in front of eyes?
- [ ] Can child see movement across the room?
- [ ] Does child respond to color?
- [ ] How does the child's vision respond to various lighting conditions?

7) WHAT ARE THE FUNCTIONAL CHARACTERISTICS OF THE VISUAL IMPAIRMENT?

- [ ] Peripheral loss?
- [ ] Central loss?
- [ ] Defective color vision?
- [ ] Defective night vision?
- [ ] Nearsighted?
- [ ] Farsighted?
- [ ] How does a child see best - bright, average, dim light?

What Is Low Vision Training?

Visually impaired students need to be trained to make maximal use of their vision. Persons with low vision (residual vision) may never use their sight as a chief mode of learning, but can be taught to use their residual vision with greater efficiency.

Vision is a process which must be learned. Many visually impaired students have never been taught how "to see" or how to function visually because they were labelled "blind."

The visual process is primarily developmental. The more a person looks, especially at close range, the more s/he stimulates the pathways to the brain. As visual information is accumulated, visual images and memories are stored. A student with low vision needs to be taught the visual process.

Encourage the student to:

- look at things
- open her/his eyes
- use lights, large objects, etc., as guides
- describe what s/he sees (help them refine this skill)

SPECIAL NEEDS PROFILE

Date: __/__/__

Student: _____

CLASSROOM SEATING

[ ] No Adjustment Necessary
[ ] Flexible Seating Required
[ ] Lighting Adjustments Needed
[ ] Electrical Outlets Necessary*
[ ] Extra Storage Needed*

*for tape recorders, lights, typewriters

SPECIAL MATERIALS/EQUIPMENT

[ ] None Required
[ ] Paper
[ ] Books
[ ] Equipment
[ ] Other

CLASSROOM INSTRUCTION

[ ] No Adjustments Necessary - Regular Classroom
[ ] Tactual Models
Adjustments Needed for:
[ ] Tests
[ ] Homework
[ ] Resource or Tutorial Service
[ ] Itinerent
[ ] Special Self-Contained Classroom

SPECIAL TRAINING FOR STUDENT

[ ] None Required
[ ] Daily Living Skills
[ ] Orientation and Mobility
[ ] Typing
[ ] Vocational Training

ADDITIONAL RESOURCES

[ ] Films
[ ] Agency Information
Inservice for:
[ ] Administrators
[ ] Parents
[ ] Teachers
[ ] Professional Books

SHOULD THE CLASSROOM BE REARRANGED?

WHERE SHOULD THE STUDENT SIT?
WHAT KIND OF LIGHTING IS BEST?

Where Should The Student Sit?

Visually impaired students may need special seating arrangements. Where the student sits depends upon . . .

- . lighting - is bright, dim, or average light better?
- . storage - must a tape recorder, braillerwriter and/or typewriter be close at hand? Are the books going to take up extra space?
- . electrical outlets - how many machines must be used at one time - tape recorder, closed circuit T.V., light, etc.?
- . flexible seating - does the student need to move up to the board during certain activites?

ASSIGNING SEATS

All Visually Impaired Students:

- . Give the student "roaming privileges" to allow movement close to demonstrations, the chalkboard, movie screens, etc., when necessary.
- . Seat the student near an electrical outlet so that equipment - tape recorders, typewriters, record players, lighted magnifiers, etc. - can be plugged in.
- . Provide the student with easy access to storage space for equipment and materials. You may want to seat the student next to a shelf or extra desk.

For the Partially Sighted Student:

- . Consider lighting needs before assigning a seat (see the next page).
- . Obtain a desk with an adjustable top or a desk-top easel to bring work close enough to read comfortably and to avoid glare.
- . Place an extra chair near the board if it is necessary for the student to move up to see the chalkboard.

For the Blind Student:

- . If necessary, place the student near the door so the desk can be located easily and independently.
- . Place the student away from distractions and background noises such as pencil sharpeners, sinks, and fans.

What Kind Of Lighting Is Best?

Proper lighting is not always bright lighting. The lighting need of each visually impaired student will be different. The best ways to determine a student's needs are to check the medical records and to experiment.

Have the student sit in different parts of the room. See which locations are best for seat work and board work. Consider the time of the day and amount of light coming in windows. Remember to AVOID GLARE!!!

There are many benefits from proper lighting, not only for the visually impaired student, but also for the entire class. The benefits include:

- better concentration on work
- greater neatness, accuracy, and achievement
- better posture, comfort, and contentment
- less fatigue

LIGHTING SUGGESTIONS

- Make sure light falls on student's working areas without shadows.
- Adjust the light to fit the needs of the student. Consider posture, shadow cast and source of light.
- Desks and chairs should be arranged so that students neither face the window nor have their backs to them.
- Stand away from the window then talking - that includes students, as well as teachers.
- Use natural light at the top and bottom of windows when possible.
- Snow and sunlight can cause glare. Pull the shades down.
- Shades should be lifted as soon as glare is gone.
- Roll shades to the top of the windows on dark days.
- Artificial light should supplement natural light on dark days - especially for the inner rows of desks.
- In some cases, desk-top lamps and lighted magnifiers may be used to increase light for an individual student.
- Some students may wear tinted glasses to reduce light sensitivity.

ARE SPECIAL MATERIALS NEEDED?

MATERIALS/EQUIPMENT CHECKLIST
WHAT IS SPECIAL EQUIPMENT?
WHAT IS LARGE PRINT?
HOW DO I KNOW IF A STUDENT NEEDS LARGE PRINT BOOKS?
WHAT IS BRAILLE?

MATERIALS/EQUIPMENT CHECKLIST

Special materials/equipment and strategies should be specified in the child's individualized education program (IEP). A visually impaired student may need:

Regular/Large Print	Braille
PAPER	
___ Regular notebook paper	___ *Braille transcription paper
___ *Bold line paper	___ *Graph paper
___ *Raised line paper	___ *Raised line paper
___ Non-glare paper	
BOOKS	
___ Regular print	___ *Braille books
___ Recorded books	___ Recorded books
___ Cassette	___ Cassette
___ Reel	___ Reel
___ Discs/Records	___ Discs/Records
___ *Large Print	
EQUIPMENT	
___ *Tape Recorder (Cassette)	___ *Tape Recorder (Cassette)
___ Typewriter (large or regular type)	___ Typewriter
___ *Adjustable top desk; desk top easel or book stand	___ *Braillewriter (6-key machine that "types braille")
___ Magnification devices (low vision aids)	___ *Slate and Stylus (for writing braille)
___ *Lamps (High Intensity)	___ *Abacus
___ Closed circuit T.V. system (enlarges standard print)	___ *Braille rulers
	___ *Braille erasers
	___ *Talking calculator (calculator with audio output)
	___ *Speech Compressor
OTHER	
___ *Large print maps	___ Braille labeler
___ *Relief models	___ *Swail dot inverter (for making raised line drawings)
___ Raised line drawing kit	___ Raised line drawing kit
___ Black felt-tip pens	___ *Braille maps and globes
___ Large, soft lead pencils	___ *Relief models (Math and Science)
___ Yellow acetate (place over purple dittos to increase contrast)	___ Optacon (electronic device that enables blind person to read print)
___ *Writing guides (helps person write on line)	___ Raised print and braille clocks
___ Motor sensory pen	___ *Writing guides (helps person write on lines)
	___ Motor sensory pen

See Appendix for complete list of resources, services, and copies of order forms.

* Items available on loan from:

State Department of Public Instruction
Division for Exceptional Children
Raleigh, North Carolina 27611

What Are Special Equipment and Materials?

The visually impaired student may need special equipment or materials in the classroom. This may include:

Abacus

Abacus is a tool used to execute mathematical computations.

Bold Line Paper

Bold line paper is available in various forms. It is used by students who find it difficult to see lines on regular paper.

Bookstands

Bookstands are useful for students who need their material elevated, closer, and/or angled.

Braillewriter

A braillewriter is a six-key machine which types braille. The braillewriter is manually operated by the student.

Closed Circuit Television

The closed circuit television enlarges printed materials onto a television screen.

Motor Sensory Pen

Motor sensory pen is an electronic device used to train students to follow lines, shapes and forms.

Optacon

The Optacon is a device which transforms print into vibrating letter configurations that are read tactually. The Optacon give the student access to printed reading material.

Raised Line Paper

Raised line paper is available in various forms such as writing paper and graph paper. This paper allows the student to learn to write on the line.

Slate and Stylus

The slate and stylus is an aid used to produce braille. The slate is a metal frame with openings through which braille dots are punched with the aid of a pointed stylus. The slate and stylus is convenient for the student because it can be carried in the pocket or purse.

Speech Compressor

Speech compressors speed up recorded materials without changing the pitch.

Tactile Maps and Globes

Relief maps can be utilized by the visually impaired student to learn geography.

Talking Book Players

The Talking Book Program is a free service provided by the Library of Congress. Students may borrow a variety of leisure books and magazines recorded on tape and records.

Talking Calculator

The talking calculator is capable of performing mathematical computations. The calculator speaks each entry and result.

Tape Recorders

Students may use tape recorders to listen to textbooks, supplementary materials, and take notes.

Variable Speed Attachments

Variable speed attachments can be attached to a tape recorder or Talking Book Machine and can be used to change the listening speed.

Writing Guides

Writing guides are rectangular forms with an open space. The student learns to write staying within the boundaries of the open space.

LOW VISION AIDS

Low vision aids can be beneficial to students with limited vision. Classroom work and mobility may be enhanced by the use of optical aids. These aids may supplement glasses and/or contact lenses. Examples include:

Glasses with Special Prescriptions (prescribed by the ophthalmologist or optometrist)

Bifocals, prisms, and contact lens combinations may be prescribed. Tinted lenses are used with the light sensitive child.

Magnifiers

Magnifiers increase the size of the image reaching the eye. At the same time, the visual field is reduced and can hinder the child

learning to read. Magnifiers may be lighted or unlighted, hand-held or in a frame. Magnifiers may also be electronic, such as closed circuit television.

Telescopic Aids

Telescopic aids are useful for viewing the chalkboard, television, class demonstrations, films, and house numbers. These small telescopes may be hand-held or placed in frames for glasses.

Low vision aids should be prescribed by an eye care specialist. Contact an optometrist, ophthalmologist, or the county health department about a Low Vision Examination.

What Is Large Print?

People usually think they have to order special books for visually impaired students. However, most visually impaired students do not require large print books.

Many visually impaired students can read standard print. The need for large print may not become apparent until third grade when the print size becomes smaller in textbooks and other classroom materials. An educational specialist is usually needed to help make the determination for the use of large print books.

Large print (or type) is one of several ways to make reading easier for the visually impaired person. Some students will use other techniques in combination with standard print, such as:

- Using magnifiers (allowing many students to read standard print)
- Reading with the print close to their eyes (this will NOT hurt the eyes although it may cause some fatigue)
- Using large print for some subjects, such as math, and standard print for others.

Large print generally refers to letters which are 14 to 30 points high. Most large print books are in 18 pt. type.

Point Size:		Examples:
6	zyxwvutsrqponmlkjihgfedcbazyxwv	telephone directory
8	zyxwvutsrqponmlkjihgfed	newspaper
9	zyxwvutsrqponmlkjihgf	magazine
10	zyxwvutsrqponmlkjih	high school textbook
12	zyxwvutsrqponml	books, children 9-12 years
14	zyxwvutsrqpon	books, children 8-9 years
18	zyxwvutsrq	books, children 7-8 years and large print texts

How Do We Know If A Student Needs Large Print Books?

To Determine if a Student Does Need Large Print Books:

Have the student read the letters in the box on the previous page starting with 18 pt. type. See how small a type size s/he can read. Let the student hold the page as close as necessary to see the letters. Once you have an appropriate type size, start experimenting with samples of that size print. Work with the student in identifying individual letters in different sizes of print; do not make this a reading test. Also, note how long the student can read that size print before becoming fatigued. You may want to use the chart below for notes.

Print Size Samples	Can be used for short period only	Can be used for long period
Telephone Books		
High School Texts		
Intermediate Level Texts		
Primer Level Books		
	Let the student hold the print as close as necessary	

If the student cannot read grade-appropriate type (i.e., 10 pt. type for high school, 14 pt. type for elementary), but can read 18 pt. type, you may wish to consider using large print books. An example of large print is included on the braille card in the appendix. Large print books are on loan from the Division of Textbooks and must be ordered on Form DT-1-2.

What Is Braille?

Braille is a symbol system that uses raised dots for touch reading and writing by the blind. Six dots are arranged in different combinations to form characters. These characters represent letters, parts of words, or entire words. Each character is formed according to a standard pattern within the six dot cell.

The braille cell consists of six dots arranged like this:

Braille Alphabet:

The braille alphabet is formed as follows:

The Braille System differs from print in its use of contractions. Contractions (or signs) are special characters representing certain groups of letters which appear frequently in the English language. Contractions were developed in order to save space and make reading easier. These contractions may use one or two cells representing entire words, parts of words, or both. There are many rules for using contractions, and they can be very confusing for the young child learning to read and write braille.

Punctuation, capital letters, foreign languages, mathematical and chemical notation, and musical scores are all included in the Braille System.

A sample braille card from The American Printing House is included in the appendix.

Braille is taught by persons certified in braille instruction.

Braille textbooks can be borrowed from the Division of Textbooks and must be ordered on Form DT-1-2.

DO TEACHING STRATEGIES NEED TO BE CHANGED?

TEACHING TIPS
READING SUGGESTIONS
MATH TIPS
WRITING TIPS
A NOTE ABOUT TYPING
WHY IS TYPING IMPORTANT?
LISTENING SUGGESTIONS

Teaching Tips

Preparing Handouts

- Use a clear black ditto to provide better contrast.
- Avoid purple dittos.
- Place a sheet of yellow acetate over a ditto to darken the purple print, if purple ditto must be used.
- Use a black felt tip pen to make further adaptations.
- Consider taping, brailling, or typing handouts in large print.
- Give visually impaired student original copy.

Taking Notes

- Notetaking is the visually impaired student's responsibility.
- Encourage the student to use one of the following techniques:
  - Obtain an advance list of assignments/notes.
  - Take notes in handwriting or braille.
  - Duplicate a copy of a good student's notes.
  - Tape record lectures so that notes can be made later.

Completing Homework and Assignments

- Completing assignments and homework is the visually impaired student's responsibility. Permit the student to make assignment modifications whenever necessary by:
  - Completing assignments in braille, type, longhand, and on tape.
  - Listening to teacher/student taped lessons.
  - Writing larger than average and in manuscript.
- The teacher should modify assignments as needed by:
  - Shortening the drills/assignments.
  - Giving clear directions.
  - Allowing additional time for completion of assignments.

- Assigning classroom duties compatible with the student's capabilities.
- Allowing for limitations in braille of research materials.

Lecturing and Demonstrating

- Be descriptive.
- Allow the student to handle the materials before, during or after a demonstration.
- Permit the student to stand/sit near the demonstration.
- Avoid lecturing with your back to the window, forcing students to look into the light.
- Vary the methods of presentation.
- Give the student a different, but related, assignment, if you are presenting visual materials that cannot be modified.
- Use words such as look and see freely.
- Teach concepts normally taught sighted pupils, such as colors.

Using Charts and Maps

- Inquire about large print, braille, and tactual maps and globes.
- Use clear, bold boundaries on maps.
- Make tactual maps and graphs with yarn and glue or a caulking compound.

Testing

- The teacher may need to:
  - Give tests orally in the classroom or in another location.
  - Tape the test.
  - Allow extra time for the visually impaired student to complete exams. Usually, time-and-a-half is acceptable for large print, double time for braille.

The student may need to:

- Answer orally, in writing, by typing, or by taping.
- Utilize large print and braille tests.

Using Talking Books and Tapes

- Introduce specific questions or instructions before the student uses the tape.
- Emphasize the purpose of the lesson.

Viewing Audiovisual Materials: Films/Filmstrips

- Include the visually impaired student when viewing films that contain descriptive narratives. The narrative will allow the visually impaired student to follow the story.
- Emphasize scene changes, additions of characters or shifts in plot if the narrative is poor.
- Allow the visually impaired student to sit as close as necessary to the screen.
- Use small filmstrip viewers with the partially sighted student. This allows the student to view the filmstrip at variable distances.
- Enlarge materials by using an overhead or opaque projector.

Developing Concepts

- Use real objects whenever possible.
- Provide realistic models whenever objects are not available.
- Develop concepts by using models of animals, people and objects. Be aware of size, texture, and shape.
- Teach multiple meanings in context.

Developing Organizational Skills and Sequential Memory

- Encourage the visually impaired student to arrange her/his books and materials in a logical, easily remembered manner.
- Organize dated papers in a looseleaf notebook (color-coded according to subject areas). Label dividers in braille or large print according to the student's needs.
- Return materials to the same place after use.
- Encourage the visually impaired student to develop skills for managing her/his time.

Taking Field Trips

. Determine if the visually impaired student will experience difficulties and/or discomfort in adjusting to different lighting conditions encountered during the field trip.

  . The student may function visually in the classroom but cannot see at dusk or in the dark.

  . The student may have difficulty in adjusting to the change from bright outside light to dim inside light.

  . Assign a "buddy" to act as a sighted guide (see Section V) if the visually impaired student will be needing assistance during the field trip.

  . Advise the field trip site that a visually impaired student will be in the group so that the staff will:

    - Verbalize demonstrations.

    - Allow students to touch exhibits.

    - Allow the visually impaired student to stand close to demonstrations and/or exhibits.

> These arrangements may result in a clearer and more comprehensive field trip for <u>all</u> students.

Additional Tips

. Wait to see how much the visually impaired student can do before offering to help; being independent is very important for the visually impaired student.

. Discipline the visually impaired student as you would other students.

. Label desks and other objects in the classroom using braille if appropriate.

. Encourage extra curricular events, such as dramatics, debate, language clubs, and attendance at dances and sports events.

. Speak directly to the visually impaired student, not through a third person. Call the student by her/his name when you want her/his attention.

. Give specific directions, relating left and right to the student's body.

. Speak to the class upon entering or leaving the room (a courtesy extended to the visually impaired student).

- Answer questions or offer information about yourself and class members. If appropriate, allow time for sighted students to ask questions about the visually impaired student-equipment, etc.

- Work to overcome unwanted mannerisms such as rocking, pressing fingers in eyes, finger tapping, etc.

- Develop awareness of habit, substitute activity, develop a confidential system of reminders.

> Do not exclude students simply because they are visually impaired. Do not assume they cannot do something without giving them an opportunity to try!

READING SUGGESTIONS

Selecting Materials

- Select materials with clear type and pictures.
- Choose materials that have adequate margins and space between lines, words, and letters.
- Use good quality paper with a non-glossy finish.
- Select materials with maximum contrast between the background and the printing.

Teaching

- Encourage the student to practice using picture clues, context clues, word-form clues, structural analysis, phonics, the dictionary, and sight vocabulary.
- Practice visual discrimination.
- Allow the visually impaired student to hold books close in order to see clearly.
- Encourage the student to maintain good posture while attaining a comfortable reading distance. Adjustable book-racks/desk stands are available commercially or can be made in school shops.
- Seek the assistance of a special education teacher for braille instruction. Braille students can join reading groups of sighted peers very early when their braille books are the same content as the books in regular print. Contact the local special education administrator or Division for Exceptional Children for information on obtaining braille books.
- Allow the student who uses large print or braille to rest when fatigued.
- Consider the different time schedules (one-and-a-half for large print; double for braille).

Reading Assistance

- Appoint readers to assist the visually impaired student with reading assignments if necessary. The reader reads to the student but does not help the visually impaired student with the work.
- Inquire about the possibility of having voice tapes made.

MATH TIPS

Adapting Materials

- Prepare drill exercises in type, large print or braille.
- Allow the visually impaired student to set up math problems on the braillewriter and/or abacus.
- Permit the visually impaired student to record answers to math problems presented in braille. Be sure the student numbers the problems as s/he tapes the answers.

Teaching Math

- Use a variety of concrete objects.
- Encourage both blind and partially sighted students to learn mental computation to avoid unnecessary writing and copying.
- Require partially sighted students to write down only the most important steps in the problem-solving sequence to avoid fatigue.
- Encourage students to set up multiplication problems in the center or near the right margin of the paper (since the work moves to the left). Long division, on the other hand, is placed at the left because the work moves to the right.
- Allow the student to use a Cramer abacus to compute math problems quickly.
- Allow the use of a talking calculator.

Additional Aids

- Special aids available for visually impaired students include:
  - Geometry figure models
  - Abacus
  - Special rulers
  - Tracing wheel
- Contact the Division for Exceptional Children for information regarding special aids.

Science Tips

Adapting Materials

- Use tactual materials when possible.
- Label materials in braille/large print.

Teaching Techniques

- Give oral description of demonstrations.
- Allow exploration (i.e., touch table).
- Use basic shapes, graphs, drawings, models to teach beginning concepts.
- Encourage lab work with a partner.
- Encourage multi-sensory responses.
- Modify assignments to fit the capabilities of the student.
- Provide relevant assignment substitutions as needed.
- Discuss hazardous areas and equipment and stress safety precautions.

Additional Aids

- Science and biology models.
- Raised line diagrams and models.
- Additional science materials on various levels are available. See appendix.

WRITING TIPS

Teaching Writing

- Encourage the student to use either manuscript or cursive, whichever is easier, clearer, and/or proper size.
- Provide ample time for practice.
- Label crayons with braille dymo tape.

Using Writing Aids

- Use the following aids to assist your students in learning to write:
  - Raised line drawing kits.
  - Sandpaper letters
  - Tracing in sand
  - Raised line paper
  - Writing guides
  - Caulking compound
  - Screen board
  - Motor sensory pen

Writing on the Chalkboard

- Write in large, broad print.
- Read aloud as you write.
- Use thick, white chalk.
- Keep the board clean to maximize contrast.
- Limit the amount of information written on the board.

Writing Tools

- Have the student use thick, soft pencils, and/or black felt-tip pens.
- Provide non-glossy paper.
- Provide bold line paper if necessary.

A Note About Typing

Typewriting is imperative for blind and visually handicapped students. It is the tool of communication with the sighted world. College bound students, especially, should become proficient in the use of this tool.

In the past in many residential schools, typewriting instruction began as early as the fourth grade. It has been determined that the course should not be introduced until the seventh or eighth grades as proper fingering techniques cannot be mastered until the hands have reached a certain maturity. The proper touch techniques are vital to the blind and visually impaired student as s/he will not be able to proof her/his own paper and needs to be extremely careful as corrections are quite difficult once the paper has been removed from the machine.

The advanced typewriting student will almost always "sense" when s/he has made an error and can then stop and make the correction. S/he can use Ko-Rec-Type quite well, and the new self-correcting machines that are now available enable the visually impaired to produce very nice work.

Masking tape can be used on the paper table in lieu of the paper guide which often slips out of place and can also be placed on the back of machines which do not have a line gauge to let the student know s/he has filled the page and needs to insert more paper.

Blind and visually impaired students, after acquiring good typewriting skills as well as spelling and grammar skills, can do very well with the dictating equipment. The transcribing field--secretarial and medical--are areas open to the blind and visually impaired student.

Also, just recently, machines have been developed that can be attached to the memory typewriter which audibly tells the student what s/he has typed.

Advantages

- Typing provides opportunities for changing eye focus.
- Typing makes it easier and quicker to complete assignments once the touch system has been mastered.
- Typing can help teachers of the visually impaired correct assignments even if they cannot read braille.

WHY IS TYPING IMPORTANT?

Typing provides a way for the visually impaired student to communicate legibly with sighted peers. As the student progresses and is responsible for homework and tests, typing will increase the student's ability to function along with sighted classmates.

- Visually impaired students should be encouraged to learn to type as soon as they reach the required physical maturity.

Accuracy and neatness must be stressed with the visually impaired student. Wrong fingerings and carelessness will only increase if not corrected at the beginning.

Typing books are available in large print, braille and on tape from the Division of Textbooks and/or the Division for Exceptional Children.

Typing Tips

Margins

Top: Count number of lines down from top edge of paper.

Side: Set margins on typewriter.

Botton: Use a backing sheet which extends to the left or right of the page being typed.

- Put a heavy black line or row of braille dots at the desired distance from the bottom of the backing sheet.

Check the Ribbon

Check the ribbon periodically to make sure the student is not typing blank pages!

Carbon Paper

Use a carbon paper to avoid typing blank pages in case the ribbon is not working.

Listening Suggestions

The visually impaired student may need assistance in developing good listening skills.

To facilitate the development of listening skills, have the visually impaired student participate in:

- Storytelling and sequencing stories
- Role playing
- Art, music, and drama activities
- Small group projects
- Learning centers
- Learning to use the telephone
- Learning to use the library
- Following directions
- Compressed speech

The Listen and Think Series is available on all levels, readiness through high school. For information on the Series, contact the Division for Exceptional Children.

WILL THE STUDENT NEED SPECIAL TRAINING?

INTRODUCTION
WHAT DAILY LIVING SKILLS ARE IMPORTANT?
WHAT IS ORIENTATION AND MOBILITY?
WHAT ABOUT VOCATIONAL TRAINING?

INTRODUCTION

The visually impaired student may require special training to become an independent person. This means being able to:

- . manage personal hygiene and appearance
- . live independently (cooking/cleaning/small repairs)
- . participate in community activities
- . secure and retain a job
- . travel independently
- . communicate with the sighted world
- . use leisure time productively

Since visually impaired people are limited in their ability to learn by observation and visual imitation, it is very important that the skills listed above are taught. The training areas and the amount of training needed will depend upon several factors:

- . age of student
- . amount of vision
- . manner in which student uses the vision
- . training at home

Some of the skills can be taught by the regular teacher and parents of the visually impaired student. The school may wish to utilize tutors, the gym teacher, counselors, and/or other staff to work with the visually impaired student.

If the student's educational needs cannot be met within the regular classroom, the individualized education program should specify the modifications/adaptations/placement needed and who will be responsible for providing special services, etc.

Visually impaired students needing extensive amounts of training in any of the above areas may need to be taught by specialists. If this is the case, contact the school administrator in charge of special education for assistance.

Skill areas explained on the following pages include:

- . Daily Living Skills
- . Orientation and Mobility
- . Low Vision Training
- . Vocational Training

What Daily Living Skills Are Important?

Daily living skills are those which allow persons to become independent and to care for their own needs. Special attention should be given to visually impaired children's skills in this area because they often do not learn by imitation as sighted children do. Parents, teachers, tutors, and others can work together to ensure that the visually impaired student will acquire the skills needed for independence and social acceptance.

Elementary Level

- Managing personal hygiene - hair, nails, teeth, bathing
- Completing chores and classroom responsibilities
- Taking care of personal possessions
- Organizing desk and work area
- Dressing independently
- Going through cafeteria line with minimal assistance
- Using knife, fork, and spoon correctly
- Using good table manners
- Identifying coins and bills
- Answering the telephone
- Understanding the concept of time

Junior High Level

- Managing personal hygiene including grooming, make-up, deodorant
- Choosing and matching clothing
- Cooking simple recipes
- Setting table and serving
- Cleaning up kitchen
- Ironing
- Mending
- Using money and making change
- Moving about independently (mobility)

High School Level

- Cooking complete menu
- Using kitchen appliances
- Organizing kitchen
- Buying independently
- Using public transportation
- Caring for children
- Cleaning house
- Arranging and decorating house
- Using leisure time productively
- Scheduling appointments
- Participating in interviews

What Is Orientation And Mobility?

Orientation and mobility (O & M) training teaches a student techniques to move freely and self-confidently within the environment.

The amount of O & M training needed will depend upon the student's vision and ability to use that vision. You can help by showing the student the location of objects and places in the building and in your classroom. Orientation should be started before the beginning of the school year whenever possible. If training must begin after the school opens, lessons should be worked in as time allows, covering areas no larger than the student is able to remember.

Describing Locations

- With young children use up/down; right/left; front/back.
- With older students use north/south and east/west.
- Compare the location of objects with the location of numbers on a clock face: "at 3:00"; "at 6:00".
- Encourage the student to use any possible clues as an aid in orientation.

auditory

- typing class
- clocks
- fans

visual

- lights
- windows
- large objects
- brightly colored objects

others

- cafeteria
- cooking classes

tactual

- banisters
- fire alarms
- doors
- dividers
- inclines
- declines
- change of texture on walls or floors
- display cases
- light switches
- drinking fountains
- bulletin boards

See checklist on next page for general O & M skills.

Some students will need O & M training from a specialist. Complete this checklist to determine the student's O & M skills. If the student is having difficulty with any of the skills, contact your special education administrator.

ORIENTATION AND MOBILITY CHECKLIST

For Teachers:

Yes	No	The student:
___	___	1) finds her/his own desk once shown.
___	___	2) does not stumble over objects in room.
___	___	3) locates particular areas in the classroom after being shown.
___	___	4) walks "normally."
___	___	5) does not veer from side to side when walking.
___	___	6) uses a deliberate system for locating areas or objects.
___	___	7) locates and travels to a sound source.

For Parents:

		The child:
___	___	1) travels independently.
___	___	2) crosses the street independently.
___	___	3) travels alone at night.
___	___	4) travels independently outside neighborhood (how far?).
___	___	5) participates in neighborhood sports/games (what kind?).
___	___	6) runs errands.

The following pages have information which will assist you in:

- classroom orientation
- building orientation
- basic mobility techniques

CLASSROOM ORIENTATION

[ ] Identify walls of room

. with younger students use front/back and left/right.

. with older students use north/south and east/west.

[ ] Identify floor texture - cement, tile, brick, board, carpet.

[ ] Describe features of walls

. bulletin boards
. shelves
. cupboards
. windows
. texture change - e.g. plaster, brick, paneling

[ ] Have student explore each of the walls and identify features (answer student's questions about unfamiliar items).

[ ] Identify student's desk and its relationship to other objects in the room.

[ ] Identify important clues:

chalkboard	flag
door	maps
pencil sharpener	bookshelves
learning centers	cabinets
clock	teacher's desk
light switches	other permanently located objects
wastebasket	

[ ] Have student walk from north to south, then east to west identifying and describing objects encountered.

[ ] Anytime the classroom is rearranged, reorient the student.

[ ] Differentiate between objects that are permanently affixed and ones that are moveable.

[ ] Make sure child can travel between various areas of the room.

If necessary, make a diagram or tactual map of the room using glued yarn, sandpaper cutouts, or other tactual materials.

ORIENTATION TO A BUILDING

Show the student the basic layout of the building including:

[ ] Number of halls and how they intersect

Make tactual drawing using glued yarn, Popsicle sticks

[ ] Direction of halls - north/south; east/west

[ ] Audible clues

Clocks
Fans
Typing Classes
Bells
Public Address

[ ] Olfactory clues

Cafeteria
Cooking classes
Chemistry/Biology lab

[ ] Tactual clues

Texture of floors/walls
Light switches
Drinking fountains

[ ] Visual clues

Windows
Lights in hall
Bulletin boards
Wall and carpet colors

[ ] Important sites

Stairs
Office
Restrooms and fixtures
Gymnasium
Playground area
Telephone

Safety Measures

. Classroom doors should be completely opened or closed.
. Close locker doors.
. Low hanging signs and objects protruding from the wall need to be shown to the student.

. Keep halls clear of equipment carts, etc.
. Room numbers should be placed at visually impaired student's eye level so the student can locate the room independently. (Use raised numerals).

These steps will insure the safety of ALL students.

Travel in the Building

Most visually impaired students will be able to travel without assistance once they have been oriented to the building. Some students, however, will need assistance in traveling around the building. The school may want to appoint students to act as sighted guides (see the following pages for techniques).

Danger Spots

Make sure the student knows where the following are located:

. electrical outlets

. light switches

. materials on floor that might be tripped over (cord, boxes, etc.)

Materials hanging from the ceiling or doorways should be above students' heads.

Rugs and paper on the floor should be firmly taped down.

Chairs should be pushed under the desks.

Fire/Tornado Drills

During drills the visually impaired student should take hold of the closest child or adult's arm and follow that person (using the sighted guide technique on page 41).

The visually impaired student should be taken through the fire drill or tornado route until he knows it well.

Lunchroom

In orienting the student to the lunchroom, explain and show the:

. entrance/exit

. location of trays and silverware

. food line

. how and where food is arranged in the line

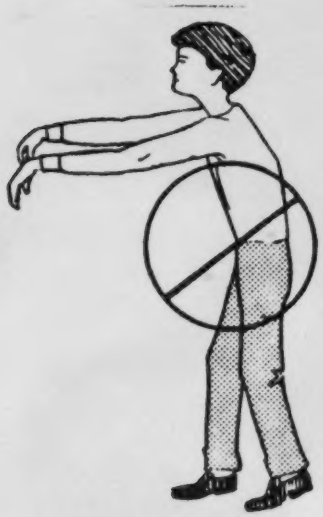
ORIENTATION AND MOBILITY TECHNIQUES - Developed by Orientation and Mobility Specialists

The Forearm Protective Position

This position protects the full width of the body at shoulder height and provides coverage of the chest area. The forearm will act as a shock absorber or bumper. The arm, and not the body, will first contact any object at chest height, thereby reducing the risk of injury.

Forearm Technique

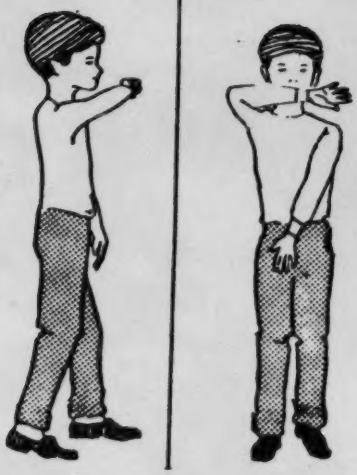
(Protect Head From Hanging Objects)



(Incorrect and Dangerous)

The Cross Body Protective Position

This position provides protection of the abdomen and groin area against waist-high items such as tables, chairs, beds, desks, etc.



Forearm in Upper Position
Cross Body

Cross Body (Lower Protection)

Locating Dropped Objects

Have the student:

1) Wait until the dropped object stops moving and note the direction of the last sound.

2) Squat down using the forearm technique.

3) Search the floor systematically. Check in between, to the sides, and behind the feet.

4) Sweep in front of body and to the sides with alternate hands.

5) Crawl or step forward but remember that any movements may require protection by either of the forearms.

6) Rise slowly after retrieving object and protect self while rising.

Safest Descent and Ascent

Incorrect and Dangerous

Hand Protects Head While Bending

Better

The Trailing Technique

Before a student uses this technique, s/he must be totally familiar with her/his environment. The trailing technique will assist the student in knowing where s/he is at any point in time. Trailing means that the student uses one arm extended in front to follow a guideline such as a wall or table edge.

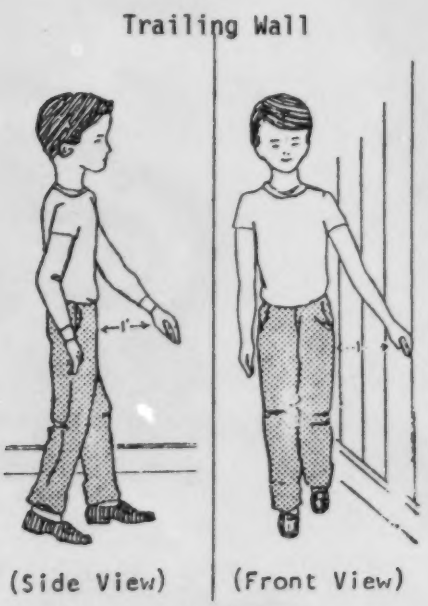
Have the student:

1) Touch the wall ahead by extending one arm, keeping hand at waist height.

2) Turn the hands toward the wall so that the knuckles of the third and fourth fingers touch the wall.

3) Protect the hand by curling all fingers into a "cupped" position in order to prevent anything from catching between the nails and fingers.

4) Walk slowly, being careful not to drift away from the wall.



Sighted Guide

"Sighted guide" refers to the way in which a visually impaired person is safely guided through the environment by a sighted individual.

The sighted guide technique allows active participation by both the guide and the person who is visually impaired. They act as a team while using this method. Specifically, the technique provides safety from bodily injury, knowledge of and orientation to the environment, and a comfortable traveling technique which minimizes stress for both individuals.

Have the student:

1) Locate the area just above the guide's elbow.

2) Position her/his fingers so that the thumb is on the outside of the guide's arm and the other fingers are on the inside.

3) Grip firmly but without undue pressure.

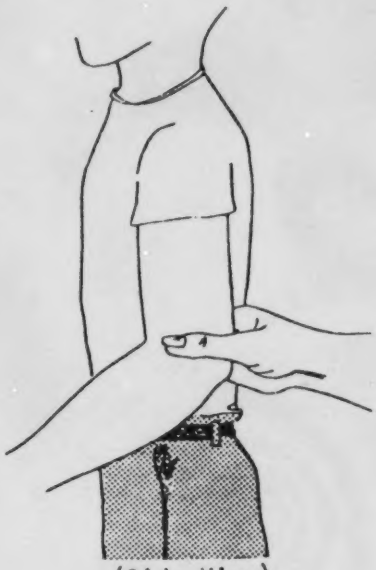
4) Hold the area above the elbow point.

5) Keep the upper arm against the side to keep the student from drifting away from the guide.

6) If visually impaired child knows guide techniques, s/he should teach her/his sighted guide.

Grip Used with Sighted Guide

(Back View)



(Side View)

Cane Technique

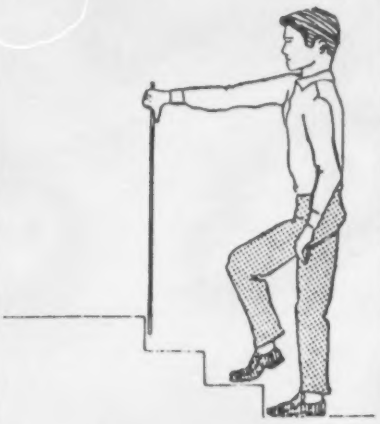
The following illustrations demonstrate correct cane technique. These skills should be taught by an orientation and mobility specialist. The illustrations may be helpful in determining the student's need for further instruction or evaluation by a specialist.

Grip Used with Cane

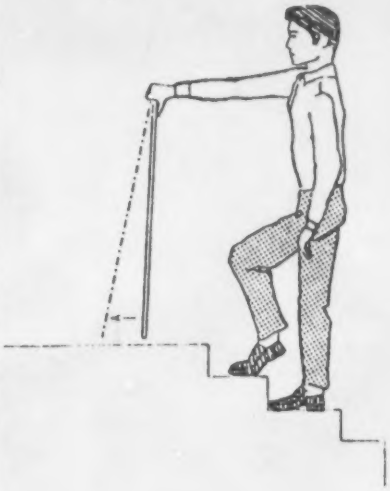
Left

Right

Going Up Stairs



Reaching the Top Step

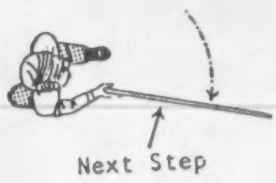


Going Down Stairs

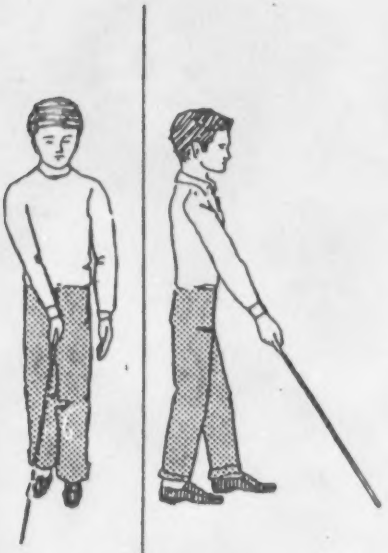
Reaching the Bottom Step

Cane Position when the Next Step is with the Left Foot

Cane Position when the Next Step is with the Right Foot

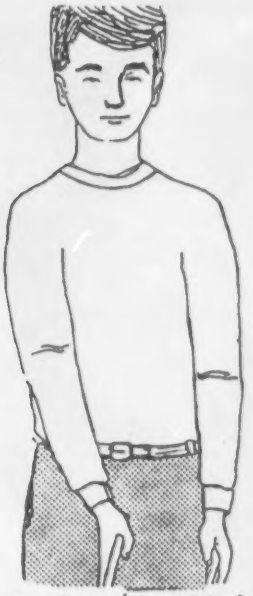


Use of Cane



(Full View) (Side View)

Arm Position When Using Cane



Elbow Straight (Not Rigid)

Remember: Cane technique is a skill that must be evaluated and taught by an orientation and mobility specialist. If a student requires this training, it should be stated in her/his individualized education program.

What About Vocational Training?

Many visually impaired students will require some vocational training. Most students have the potential to be successful in many vocational areas.

Visually impaired students should be included in the regular vocational programs in their schools whenever possible. Examples of vocational programs include:

- Distributive Education
- Work Study Programs
- Business Courses
- Automotive Workshop
- Home Economics
- Child Care

At age 14 the visually impaired student may be eligible for assistance from the Division of Services for the Blind, Rehabilitation Program. If the student qualifies, the service might include:

- Diagnosis
  Restoration, treatment, optical appliances as prescribed
- Vocational Evaluation
  Raleigh Lion's Club
- Guidance and Counseling
  Adolescence adjustment (after age 14 or completion of grade 8 through the summer preceding grade 12).
  Project Early Bird (academic evaluation to determine potential for college. Summer immediately after graduation).

Contact the state or regional office of the Division of Services for the Blind for further information.

WHAT OTHER INSTRUCTIONAL AREAS NEED ATTENTION?

TEACHING PHYSICAL EDUCATION
TEACHING INDUSTRIAL TECHNOLOGY
TEACHING HOME ECONOMICS

Visually impaired students can and want to perform physical education activities. Although there may be some hazards and complications involved, these can be overcome with some forethought and use of common sense by an interested and caring teacher.

General Consideration

Learn About the Student's Eye Disorder and Related Health Problems

Check the student's records to see if any physical limitations are imposed. Take advantage of any residual vision. Keep in mind the importance of lighting and color contrasts.

Use Movement as a Mode of Learning

Guide the student, but do not overprotect her/him. It is much better for a student to get a few bumps and bruises by interacting with the environment than to be inactive. By moving and physically interacting with the environment, the visually impaired student has another way to learn about self and the world. Develop body image, concepts about space and environment. Try to reinforce mobility and orientation skills.

Use Descriptive Verbal Instructions

Verbalize instructions when demonstrating a skill.

Describe activities in body-oriented language.

Involve the Student in a Physically Active Way

Avoid having the visually impaired student be a scorekeeper or a timer in a game. See that the visually impaired student is totally active during the gym period. Involvement should be success oriented. It may be necessary to modify the activity.

Provide a Fun and Safe Environment

Orient the student to the area in which s/he will be playing or swimming. Help her/him discover the location of large pieces of equipment. If equipment is moved to a different location, help the student find the relocated object and its relationship to walls and other equipment. Orient the student to facilities and equipment.

Beware of Flying Objects

Be aware of flying objects. The surprise element of a fast-moving volleyball or basketball game can result in frustration and grave consequences for the visually impaired student.

Make Use of a Sighted Guide

Assign partners when necessary. In many activities and games, a partner can greatly enhance the enjoyment and safety of the visually impaired student. Don't always use the same partner.

Suggested Adaptations: Development of Fundamental Skills and Games

Encourage movement exploration. Focus on how the body moves by bending, stretching, turning, swinging, and curling. Focus on how the body moves by itself, as well as its relationship to objects and other people. Help the visually impaired student become aware of her/his body and the ways in which it can move. A good movement vocabulary will help the student to learn new skills more efficiently.

Teach the student to jump, land, and roll while standing in place, while moving, and while jumping off equipment. This safety skill will help the student become more confident.

Tag Games

Have the person who is "it" wear an elastic wristband with bells attached to it.

Boundaries

Provide a change in floor texture. For example, place a rubber carpet runner or tumbling mat next to the wall. The student knows that when s/he steps onto the changed surface s/he is stepping out of bounds. The change in surface is also a warning signal that a wall or other object is near. The student will move more freely if s/he knows that hazardous objects are not on the playing area.

Throwing and Catching

Give the receiver a sound clue before throwing the ball. A bounce pass will be easier to receive than a direct pass. Utilize large heavy balloons to slow down the speed of the ball. The use of yarn balls, fluff balls, and Nerf balls should be used when playing the popular game of dodge ball. When throwing at a target, provide a sound reinforcement (bells) behind the target.

Bowling

Use a handrail to guide the bowler in a straight path toward the pins. Give immediate feedback about the number of pins that are knocked down.

Golf

Help the student position her/his body with the ball and target.

Striking and Hitting

Practice striking skills by placing a ball on a tee or suspending it from the ceiling. If you want the ball to move through space upon hitting it, attach the ball to the rope with velcro.

Running

Provide safe assistance in running by using partners.

Allow the student to run alone, holding onto a rope stretched between two points.

Provide a warning signal about eight feet from each end. Tape can be wrapped around the rope to indicate a turning point.

Body Centered or Individual Sports and Activities

These activities are valuable for the visually impaired student and require very little adaptation. Give explicit body-oriented instructions such as "to your left" or "pull elbow into sides" or "reach forward and then up."

Dancing

Provide opportunities to practice various dances.

- Line dances - one line everyone holding hands.
- Novelty dances - all doing same movements in own self space.
- Partner dances - partners keep in body or voice contact.
- Modern or Jazz dances - student remains in specific boundary area free of obstacles.

Gymnastics

Modify gymnastics equipment in the following ways:

- Trampoline - weave a patch of yarn in the center of the mat or tie a bell directly under the center.
- Vaulting - start with hands on vault or use a one-step approach.
- Beam - encourage bare feet or light slippers; put a long strip of carpet the same size as the beam on the floor.
- Tumbling - provide an area free of objects; have a buffer area around the exercise mat to give a warning of upcoming obstacles.

Archery

Provide a tactual floor cue (long board or sidewalk) which is perpendicular to the target. Have the student stand sideways to the tactual floor cue. Provide a sound cue from the target using a portable sound source below and in front of the target. Help the student aim at the target by telling her/him to move the bow to the left, right, up, or down.

Swimming

Teach the visually impaired student to use a delayed arm stroke as s/he anticipates the upcoming wall. Make the racing lane about three feet wide in order to give immediate input to the student about the direction of her/his stroke in relationship to a straight line. The student should request an "all clear" signal before diving.

Track and Field

Run tandem with a sighted guide.

Use a one-step approach in high jumping (some visually impaired students may be able to take more than one step and be successful at clearing the bar).

Begin with a standing start for the hop, step and jump and the long jump. Provide a sound source from the direction you want the student to move.

Provide a sound clue (clap, beeper, or counting) from the direction you want the object released for the discus and shotput.

Wrestling

Use a hand touch start. Whenever body contact is lost, start again in the stance position with the hand touch.

Popular Team Sports

Most of the fundamental skills of each sport can be taught to the student and then modified for team games.

Basketball

Focus on dribbling skills.

Develop short ball handling and dribbling routines.

Position the student at the free throw line; give a clapping sound clue while standing directly under the basket. By trial and error, the student will learn at which angle he must release the ball in order to make a basket.

Place a beeper at the back rim of the basket as a sound source to locate the basket.

Attach a small carpet square to the free throw line. When the student gets to the carpet square, he would then turn to the sound source and shoot.

Warn the visually impaired student of an upcoming pass when playing with a partner or group.

Use bounce passes to give the visually impaired student additional warning.

Baseball/Softball

Practice hitting a ball off of a tee or from a suspended rope.

Let the visually impaired student run bases with the batter; playing the field could be extremely hazardous.

Use foam or wiffle balls and a rubber or plastic bat for safety. The game could also be played indoors.

Kickball

Run bases with a sighted guide. Avoid having someone else run for the visually impaired student.

Kick a stationary ball.

Ask the catcher to give the visually impaired pitcher a sound clue to aid in pitching.

Soccer

Kick and track a milk carton filled with bells.

Use a tin can filled with pebbles when playing outside on an asphalt or concrete surface.

Hockey

Use the same hitting items as soccer.

Allow the visually impaired student to use the goalie's wider and flatter stick (greater surface area will aid the student in finding the puck or ball).

Volleyball

Practice lead-up skills of volleying with the use of a large, heavy balloon filled with small bells. The slower speed of the balloon allows the partially sighted student more time to track the balloon.

Play modified games with a sponge ball or Nerf ball.

AAU Physical Fitness Test

The AAU Physical Fitness Test is appropriate and has been normed for visually impaired students.

Orientation to a Classroom

- Walk the student around the laboratory (clockwise) using the door as a landmark and allow her/him to explore (touch) the laboratory. Be sure the electrical power is off.
- Discuss hazardous areas and equipment and their relationship to work areas and fire escape routes.
- Point out major landmarks that will assist the student with travel routines in all areas in the shop (lockers, safety cabinet, first aid kit, drinking fountain, handsink).
- Schedule a time when this orientation can be done individually with the visually impaired student.

Special Tools

- Provide/adapt special equipment, tools, and supplies that will assist the visually impaired student in the laboratory.

Teaching Suggestions

- Simulate work situations that encourage group participation.
- Use a step-by-step demonstration process.
- Provide a replica or model while describing each process.
- Allow the visually impaired student to explore the machinery and materials to aid in understanding.
- Stress safety precaution.
- Discuss the prerequisites, skills, and training for a specific career in industry.

Teaching Home Economics

Instruction in home economics is an area that is vital to independent living as an adult. The visually impaired student may need guidance as s/he prepares for self-sufficiency.

Orientation to the Home Economics Area . . .

- Walk the student around the room clockwise, using the door to the hallway as a landmark.
- If kitchen labs are color or number coded (green kitchen), indicate the location of each lab in a sequential order.
- Point out major landmarks (stove, refrigerator, tote trays, sofa).
- Identify danger areas such as outlets and hot appliances.
- Indicate the location of the fire extinguishers.

Safety Considerations

- Keep cupboards and drawers closed at all times.
- Clean up spills immediately.
- Always replace items in the proper location! Consistency is important if the visually impaired student is to be independent in the classroom.
- Inform the visually impaired student where hot appliances, equipment, and sharp, pointed utensils are located.
- Teach the visually impaired student about safety precautions concerning clothing, hair styles, jewelry, pot handles, and cords.

Adaptive Equipment and Utensils

- Use special sewing machine attachments.
- Install braille knobs.
- Purchase or make braille and large print recipe books and texts.
- Purchase braille timers.
- Label items with a Braille Dymo Labeler.

DOES THE STUDENT NEED GUIDANCE AND COUNSELING?

DOES THE STUDENT NEED SPECIAL GUIDANCE AND COUNSELING?

Does the Student Need Special Guidance and Counseling?

Student needs may include:

- Understanding atmosphere (hostile, friendly, etc.).
- Learning to deal with their feelings about their physical disability.
- Coping with attitudes of others.
- Communicating their needs.
- Establishing realistic goals.
- Information as to what services are available and where to obtain them.
- Help in developing family acceptance and support.

Helpful personnel:

- Classroom teacher
- School psychologist
- School guidance counselor
- Teacher of exceptional children
- Vocational rehabilitation counselors
- Social workers for the blind
- Local Mental Health Center staff
- Director of Exceptional Children

APPENDICES

Forms

VH-1 -- Registration of VH Pupils
Federal Quota Order Blank
Division of Textbook Form BB-401
Division of Textbook Basic Order Form
Supplies for VH Pupils
VH-4 -- Interdepartmental

Resources for the Visually Handicapped
Visually Impaired: Assessment
Large Print/Braille Card

Forms

In order for a child to be served in programs for the visually impaired or to receive services such as books and materials as a regular classroom member, several forms need to be used. Included in this section on "Forms" is a brief description of the various forms and their use.

VH-1 -- Registration of Visually Handicapped Pupils

Used to register visually handicapped pupils in order for them to be eligible to receive services. Directions are on the front side and criteria for eligibility are on the reverse.

Federal Quota Order Blank

Form to be used when ordering from the American Printing House (APH) in order to take advantage of the Federal Quota funds. These funds are provided for each legally blind child registered with the North Carolina Department of Public Instruction. The Quota blank must be sent to the Division for Exceptional Children for signing by the trustee. Additional blanks and free catalogs of all materials available from the American Printing House may be secured by writing directly to the American Printing House. A summary of the Federal Quota system is printed on the sample blank.

Division of Textbook (DT) Form BB-401

Used by the Division for Exceptional Children to access books to be purchased by the Division of Textbooks. Large print, braille and taped books that are in the yearly textbook catalog can be purchased using this source.

Division of Textbooks (DT) Basic Order Forms (DT-1-1)

To be used by the Local Education Agency to order textbooks. For special books such as large type or braille seperate order blanks should be used for each medium (large print or braille). Notation should be made at top of form. No books are available in large print in grade 1. Braille books in grade 1 may possibly be available. The DT Basic Textbook Catalog gives further information concerning availability of large print books.

Supplies for Visually Handicapped Pupils (Papers Only)

Form listing all of the paper items available to any visually handicapped pupil. Any of these paper items are provided at no cost to the Local Education Agency or the pupil. Additional copies may be secured by writing to the Division of Textbooks.

VH-4 - Interdepartmental

Division for Exceptional Children - Division of Textbooks form that is used to request shipment of books to Local Education Agencies by the Division for Exceptional Children. One copy will be included in any shipment of books to a school system. Notations as to availability are noted on packing slip.

CRITERIA FOR DETERMINING ELIGIBILITY OF CHILDREN

These criteria should be evidenced by a report of an eye examination made by an eye specialist (ophthalmologist or optometrist). The report of eye examination should be not more than two years old, except in cases of those children for whom no change in the condition of the eyes can be expected.

1. Distance visual acuity of 20/70 or less in the better eye after maximum correction.
2. Insufficient near vision for reading regular print textbooks.
3. Serious progressive eye difficulties.

REPORT OF DEGREE OF VISION

Where possible, visual acuity readings must be given in terms of distance vision on the Snellen Chart -- for eye separately. The following abbreviations and terms must be used:

5/100 . . . (or any distance reading 20/70 or less on the Snellen Chart)
VF 5 . . . (or any restricted field of less than 20 degrees, i.e., VF 20)
NIL . . . . (totally blind)
ENUC . . . (enucleated--eyeball removed)
PROS . . . (prosthesis--artificial eye)
ANOPH . . . (anophthalmus--absence of true eyeball)
LP . . . . (light perception)
LPP . . . . (light perception and projection)
SHAD . . . (sees only shadows)
FORMS . . . (sees only large forms)
OP . . . . (object perception)
HM . . . . (hand movement, plus distance, e.g., HM 3 ft.--meaning hand motions at 3 ft.)
CF . . . . (counts fingers, plus distance, e.g., CF 1 ft., or CF 5 in.--meaning counts fingers at 1 foot, or counts fingers at 5 inches)

TABLE OF APPROXIMATE EQUIVALENT VISUAL ACUITY NOTATIONS

Distant Snellen	Near A.M.A.	Near Jaeger	% Central Visual Efficiency for Near	Point	Usual Type Text Size
20/20 (ft.)	14/14 (in.)	1	100	3	Mail order catalogue
20/30	14/21	2	95	5	Want ads
20/40	14/28	4	90	6	Telephone directory
20/50	14/35	6	50	8	Newspaper text
20/60	14/42	8	40	9	Adult text books
20/80	14/56	10	20	12	Children's books 9-12 yrs.
20/100	14/70	11	15	14	Children's books 8-9 yrs.
20/120	14/84	12	10	18	Children's books 7-8 yrs.
20/200	14/140	17	2	24	Large type text
12.5/200 (20/320)	14/224	19	1.5		
8/200 (20/480)	14/336	20	1		

VH-1

North Carolina Department of Public Instruction
Division for Exceptional Children

REGISTRATION OF VISUALLY HANDICAPPED PUPILS

DIRECTIONS: Send two copies to Division for Exceptional Children, North Carolina Dept. of Public Instruction, Raleigh, North Carolina, 27611. One copy will be returned to be filed in the student's cumulative folder.

Name _____ Birthdate _____

Parent or Guardian and Address _____
Street City Zip

Additional Handicap _____

Administrative Unit _____ School _____ Grade _____

Date _____

_____
Signature of School Supt. or His Designee

REPORT OF EYE EXAMINATION

NOTE: This portion of form to be completed by eye specialist. Eye Examination Report form of the North Carolina State Commission for the Blind or a letter signed by the examining eye specialist will be accepted, but the information requested below is needed to plan for the pupil's educational needs. SEE OTHER SIDE FOR EXPLANATORY INFORMATION.

Visual Acuity:	Without Correction (Distant)	Without Correction (Near)	With Correction (Distant)	With Correction (Near)
Right Eye	___ ___	_____	_____	_____
Left Eye	_____	_____	_____	_____

Prescription for Refractive Error - Right Eye _____

Left Eye _____

Visual Field is contracted to 20 degrees or less: Yes _____ No _____

Cause _____ Probable age at onset _____

Diagnosis _____

Prognosis - Impairment is considered to be: Stable _____ Deteriorating _____

Date of last examination _____ Recommended date of next examination _____

Recommendations:

Date _____

_____
Signature of Eye Specialist and Address

For use of State Department of Public Instruction:

Approved: N.C. _____
Fed. _____ By _____ Date _____

FEDERAL QUOTA ORDER BLANK

American Printing House for the Blind, Inc.

1839 Frankfort Ave. — Box 6085 — Louisville, Kentucky 40206

502-895-2405

APH USE ONLY

Customer Number_____

APH Order Number_____

CUSTOMER'S USE

Order Number_____ Order Date_____

Order Approval Trustees Signature

Authorized Signature

*Ship To*_____

*Bill To*_____

DIVISION FOR EXCEPTIONAL CHILDREN
N. C. DEPT. OF PUBLIC INSTRUCTION
RALEIGH, NORTH CAROLINA 27602

Zip Code

Zip Code

PLEASE FOLLOW INSTRUCTIONS CAREFULLY. Double space typing. List EACH type of material, that is, Braille, Educational Aids, Inkprint, Large Type, R.E.A.L. and Talking Books, on a separate order blank. NO RETURNS ACCEPTED WITHOUT AUTHORIZATION.

Quantity	APH Use Only Code	Catalog Number	Description	Unit Price	Net Amount

Registration of Visually Impaired Pupils

Under the provisions of the Act of Congress "To Promote the Education of the Blind" aproved March 3, 1879 (20 STAT.467) as amended, it is required that the American Printing House trustee "prepare, sign and forward registrations of blind students in educational institutions (including public and private schools) of less than college grade" to the American Printing House. These registrations are required to be taken on the first Monday in January of each (calendar) year, to be used as the basis for determining a per capita rate for quota allocations for the ensuing fiscal year. Quota allotments are made each October 1 to the various State Departments and are determined by dividing the total number of pupils registered in January into the total amount of funds appropriated by Congress. No direct cash allotments are made and all materials supplied through the Federal Act must be manufactured at or processed by the American Printing House for the Blind.

For purposes of registration with the American Printing House, only those pupils whose vision comes within the following definition of blindness can be registered:

> "Central visual acuity of 20/200 or less in the better eye with correcting glasses, or a peripheral field so contracted that the widest diameter of such field subtends an angular distance no greater than 20 degrees."

I hereby certify that the school system or public institution to which the attached materials are directed to be sent has filed with the Dept. of Health, Education and Welfare an accepted statement of compliance with Title VI of the Civil Rights Act of 1964.

GRAPHIC BUSINESS SYSTEMS OF RALEIGH, INC. (919) 876-0457 31 2232-4

NORTH CAROLINA

DIVISION OF TEXTBOOKS
STATE BOARD OF EDUCATION
476 EDUCATION BUILDING

RALEIGH 27611

FORM EIB—401

Purchasing Order No. 4564

TO (VENDOR):

SHIP TO:

State Textbook Warehouse, 2905 Reedy Creek Road

F. O. B. Raleigh, N. C. 27607

TERMS:

MAIL INVOICES IN QUADRUPLICATE THE DAY SHIPMENT OR DELIVERY IS MADE. SHOW ABOVE ORDER NO. ON INVOICES, BILLS OF LADING, DELIVERY SLIPS AND PACKAGES. BILL EACH ORDER NO. SEPARATELY.

QUANTITY	DESCRIPTION	UNIT PRICE	TOTAL PRICE

FORM DT-1.1
1965-51

LARGE TYPE BOOKS

NORTH CAROLINA STATE BOARD OF EDUCATION
DIVISION OF TEXTBOOKS

ELEMENTARY BASIC ORDER FORM

INVOICE NO. ____ ____

ORDER NO. ____

UNIT [ ][ ][ ] APPROVED ____ DATE ____
SUPERINTENDENT

Type Order (Check One)
☐ State Membership Allotment
☐ Local or State Fund 624
☐ NDEA Project No. ____
☐ ESEA Title ____
Project No. ____

Date of Original Order ____

Columns with the headings Price and Amount are to be used for the purpose of a sale or for use in determining the value of books shipped to each administrative unit.

FOR USE BY DIVISION OF TEXTBOOKS ONLY

GRADE TITLE & SERIAL NUMBER		QUAN. ORDERED	FOR USE BY DIVISION OF TEXTBOOKS ONLY: SHIPPED NEW	SHIPPED REBOUND	BACK ORDERED	PRICE	AMOUNT
GRADE 1							
Creat. Gr. with H'writ., 1, 2E (p)	1-01-003			XXX		1.86	
Imag. Line H'writ.: Go. Pond. (p)	1-01-004			XXX		1.63	
Puppy Paws, PP1 (p)	1-02-046			XXX		1.88	
Jumping Jamboree, PP2 (p)	1-02-047			XXX		1.88	
No Cages, Please, PP3 (p)	1-02-048			XXX		1.88	
Dragon Wings, P	1-02-049			XXX		3.92	
Calico Caper 1	1-02-050			XXX		4.14	
Sun Up, PP1 (p)	1-02-051			XXX		2.07	
Happy Morning, PP2 (p)	1-02-052			XXX		2.07	
Magic Afternoon, PP3 (p)	1-02-053			XXX		2.07	
Sun and Shadow, P	1-02-054			XXX		4.28	
Together We Go, 1	1-02-055			XXX		4.55	
Rockets, PP1 (p)	1-02-056			XXX		1.66	
Surprises, PP2 (p)	1-02-057			XXX		1.82	
Footprints, PP3 (p)	1-02-058			XXX		1.94	
Honeycomb, P	1-02-059			XXX		3.94	
Cloverleaf, 1	1-02-060			XXX		4.22	
Rides and Races, PP1, L6 (p)	1-02-061			XXX		1.82	
High Wires & Wigs, PP2, L7 (p)	1-02-062			XXX		1.82	
Surprises & Prizes, PP3, L8 (p)	1-02-063			XXX		1.82	
Upside and Down, P, L9	1-02-064			XXX		4.11	
Inside and Out, 1, L10	1-02-065			XXX		4.11	
Little Pig, PP1, L2 (p)	1-02-066			XXX		1.66	
C. A. Zoo & Kang., PP2, L3 (p)	1-02-067			XXX		1.85	
Lost and Found, PP4 (p)	1-02-068			XXX		1.90	
Magic Rings & Fun. Things, P, L5	1-02-069			XXX		3.98	
Red Rock Ranch, 1, L6	1-02-070			XXX		4.25	
A Pocket of Sunshine, PP1, L2 (p)	1-02-071			XXX		2.44	
A Duck Is a Duck, PP2, L3 (p)	1-02-072			XXX		1.94	
Helicopt. & Gingerbr., PP3, L4 (p)	1-02-073			XXX		1.94	
May I Come In?, 1, L5	1-02-074			XXX		3.91	
Beg. Music, Gr. 1, T.E. (p)	1-11-004			XXX		7.10	
Expl. Music, Gr. 1, Tea. Ref. Bk.	1-11-005			XXX		6.90	
Spectrum of Mus., G. 1, T.E. (p)	1-11-006			XXX		7.92	
Lang. for Daily Use, B1. L1 TE (p)	1-41-005			XXX		3.26	
Listen., Read., & Talk., TE (p)	1-41-006			XXX		2.01	
Our Language Today, L. A, TE (p)	1-41-007			XXX		3.50	
Spectrum of Eng., Rad, L1, TE (p)	1-41-008			XXX		2.29	
Heath Ele. Math., B.1, T.A.E. (p)	1-51-004			XXX		5.50	
Holt School Math., B.1, T.E. (p)	1-51-005			XXX		4.55	
Macmillan Math., Bk. 1, T.E. (p)	1-51-006			XXX		3.42	
Math. Around Us, Bk. 1, T.E. (p)	1-51-007			XXX		5.50	
Accent on Science, L1, T. A. E. (p)	1-71-005			XXX		6.62	
Concepts in Sc., Blue, L1, T.E. (p)	1-71-006			XXX		6.02	
Gateways to Sci., L1, T.E. (p)	1-71-007			XXX		7.12	
Holt Ele. Sci., B. 1, T.E. (p)	1-71-008			XXX		6.49	
Living in Families	1-81-004			XXX		4.58	
People, BV	1-81-005			XXX		4.33	
School Friends	1-81-006					3.59	
GRADE 2							
Creat. Gr. with H.writ., 2, 2E (p)	2-01-004			XXX		1.86	
Cr. Gro. -H'writ., 2, Trans. 2E (p)	2-01-005			XXX		1.86	
Imag. Li. H'wr. Wr On (Man.) (p)	2-01-006			XXX		1.63	
Im. Line H'wr. Ch. Stop (Trs.) (p)	2-01-007			XXX		1.63	
Daisy Days, 2-1	2-02-020			XXX		4.86	
Hoorenanny, 2-2	2-C2-021			XXX		4.86	
World of Surprises, 2-1	2-02-022			XXX		4.97	
People and Places	2-C2-023			XXX		5.10	
Sunburst, 2-1	2-02-024			XXX		4.55	
Tapestry, 2-2	2-C2-025			XXX		4.55	
Moon Magic, 2-1, L11	2-02-026			XXX		4.58	
Riding Rainbows, 2-2, L12	2-02-027			XXX		4.58	
Boxcars & Bottles Caps, 2-1, L7	2-02-028			XXX		4.55	
Cartwheels & Caterpil., 2-2, L8	2-02-029			XXX		4.89	
One to Grow On, 2-1, L6	2-02-030			XXX		4.46	
Dog Next Door & O. Stor., 2-2, L7	2-02-031			XXX		4.78	
Bas. Goals in Spell., Gr. 2, SE	2-03-004					4.30	
Growth in Spelling, Level 2	2-03-005					4.12	
Spell Correctly, Gr. 2	2-03-006			XXX		4.14	
Spell.: Words & Skills, Gr. 2	2-03-007					4.30	
Enjoying Music, Gr. 2	2-11-004					3.48	
Exploring Music, Gr. 2	2-11-005					3.86	
Spectrum of Music, Gr 2	2-11-006			XXX		4.61	
Self Exp. & Cond /Hum. Blue, L1	2-14-001					3.59	
Lang. for Daily Use Rad, L 2, TE (p)	2-41-005			XXX		5.33	
Listen., Read., Talk., & Writ., TE (p)	2-41-006			XXX		2.46	
Our Language Today, L B, TE (p)	2-41-007			XXX		3.50	

FOR USE BY DIVISION OF TEXTBOOKS ONLY

TOTAL BOOKS	Shipped New	Shipped Rebound
PAGE TOTALS		
TOTALS		
GRAND TOTAL		

SHIPPING INFORMATION

Carrier ____

Date Shipped ____

No. of Cartons ____

Weight ____

Filled by ____

Checked by ____

INSTRUCTIONS TO UNITS:

Please prepare this form in triplicate.

Submit original and pink copy to Division of Textbooks.

Retain blue copy for your Records.

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NORTH CAROLINA DEPARTMENT OF PUBLIC INSTRUCTION

ORDER BLANK FOR SUPPLIES FOR VISUALLY HANDICAPPED PUPILS

DIRECTIONS: Submit two copies to Division of Textbooks, North Carolina State Board of Education, Raleigh, North Carolina 27602. Retain a file copy.

Note: Supplies will be shipped by the Division of Textbooks to the book receiving location in the local administrative unit unless a name and address are given below.

Administrative Unit_____ Date_____

Name_____

Address_____

SUPPLIES FOR SCHOOL USE

Number Packages	For Print Readers
	Paper, buff-colored, green lines 3/4" apart, 9" x 12", 60 sheets per package:
_____	Lines running short way of paper
_____	Lines running long way of paper
	Paper, white, black lines, 8½" x 11", 100 sheets per package:
_____	Lines 7/16" apart
_____	Lines 9/16" apart
_____	Paper, white, black lines, for beginning writers, 8½" x 11", 25 sheets per package
	Graph sheets, 10 sheets per package:
_____	8½" x 11", ½" squares
_____	11" x 11", 1" squares
_____	North Carolina Outline Map 11" x 25"
_____	United States Outline Map 20½" x 13 3/4"

Number Packages	For Braille Readers
	Braille transcribing paper, three-hole punched, 100 sheets per pkg.
_____	8½" x 11"
_____	11½" x 11"
	Brown magazine paper, three-hole punched, 50 sheets per package:
_____	8½" x 11"
_____	11" x 11"
_____	Raised line paper, 10 sheets per package
	Graph sheets, 10 sheets per package
_____	8½" x 11", ½" squares
_____	11" x 11", 1" squares
_____	United States outline map, 20½" x 13 3/4", 2 per package

VH-4

NORTH CAROLINA DEPARTMENT OF PUBLIC INSTRUCTION
DIVISION FOR EXCEPTIONAL CHILDREN
DIVISION OF TEXTBOOKS

(Interdepartmental)

BOOKS FOR VISUALLY HANDICAPPED STUDENTS

Name of Contact _____ Date _____

LEA & Address _____

Media: Braille ____ Large Type ____ Tape ____

Borrowed from: _____ Purchased from: _____

_____ _____

_____ _____

Bookcode	Textbook	Requested	Number Sent	Date Sent

Date returned from Contact _____

Date returned to Owner _____

(Reverse this page)

. Social Service Division -- Provides financial assistance for persons who qualify for aid to the blind and specialized services in meeting the unique needs of persons because of blindness. Certifies legally blind applicants for talking book machines.

. Rehabilitation Division -- Provides services to enable visually handicapped persons to return to employment or to be trained and placed in other employment.

. "Early Bird" -- A college preparatory program for visually impaired students. School counselors or students should make contact with the rehabilitation or home counselor at the nearest Division of Services for the Blind office.

District Offices:

Box 7066, Asheville 28807
207-11 Hawthorne Lane, Charlotte 28204
301 South Elm Street, Greensboro 27041
Box 2647, Greenville 27834
Box 2658, Raleigh 27602
Fourth and Chestnut Streets, Wilmington 28401
West Fourth Street, Winston-Salem 27101

Residential Centers for Blind Multi-Handicapped Children:
State Department of Human Resources

. Murdoch Center, Butner 27509
. O'Berry Center, Godlsboro 27530
. Caswell Center, Kinston 28501
. Western Carolina Center, Morganton 28655

Resources for the Visually Handicapped

State Government Agencies

Division for Exceptional Children
State Department of Public Instruction
Raleigh, North Carolina 27611

Provides consultative services to public schools, residential centers and private institutions in program planning, development, management and evaluation for blind, partially sighted, and deaf/blind children and youth. Special assistance is provided in material and textbook acquisition.

The Governor Morehead School
State Department of Human Resources
301 Ashe Avenue
Raleigh, North Carolina 27606

State residential school for the blind.

Regional Library for the Blind
North Carolina State Library
State Department of Cultural Resources
1811 North Boulevard
Raleigh, North Carolina 27655

Free lending library of talking book records and large-type, braille, and taped books. Certifies partially seeing applicants for talking book machines from Library of Congress and is the State contact for all local services.

North Carolina Museum of Art
Mary Duke Biddle Gallery for the Blind
State Department of Cultural Resources
107 East Morgan Street
Raleigh, North Carolina 27601

Offers study and appreciation of art and art history. Provides a collection of sculpture for "hands-on" enjoyment by blind persons.

Division of Services for the Blind
State Department of Human Resources
410 North Boylan Avenue
Raleigh, North Carolina 27603

. Medical Division -- Provides medical eye care for indigent people.

Local School Systems

Some local school systems provide special resource rooms and/or itinerant teacher services for the visually impaired learners. For information on available services in a specific local school system, the coordinator of programs for exceptional children should be contacted.

Private State Agencies

North Carolina Society for the Prevention of Blindness
1006 Lamond Street
Durham, North Carolina 27701

Offers assistance in conducting a school vision screening program.

North Carolina Lion's Association for the Blind
P.O. Box 28124
Raleigh, North Carolina 27611

Cooperates with Lions Clubs, state agencies, and other organizations in rendering services for the visually handicapped when other funds are not available.

Raleigh Lions Clinic for the Blind
315 Hubert Street
Raleigh, North Carolina 27603

Provides occupational assessment of blind teen-agers and adults.

National Agencies

American Foundation for the Blind (AFB)
15 West 15th Street
New York, New York 10011

Catalogs of materials and books on visually handicapped.

National Society for the Prevention of Blindness
79 Madison Avenue
New York, New York 10010

Preschool vision testing, glaucoma screening, cataract education, pamphlets and films on eye health and eye safety.

American Printing House for the Blind (APH)
1839 Frankfort Avenue
Louisville, Kentucky 40206

Catalogs of materials and books available in large print, braille and recorded.

Visual Impairec Depository
State of Washington
14721 Murray Street, S.W.
Tacoma, Washington 98439

Provides microfiche of books in cooperation with the Division for Exceptional Children.

Recordings for the Blind (RFB)
215 East 58th Street
New York, New York 10022

Provides recordings of textbooks as well as recreational books for any visually handicapped person. Also, can record materials for eligible learning disabled and physically handicapped persons.

Library of Congress (LOC)
1291 Taylor Street
Washington, D.C. 20542

National library service for the blind and physically handicapped.

Hadley School for the Blind
700 Elm Street
Winnetka, Illinois 60093

Provides free home study correspondence courses for blind students and adults.

Howe Press
Perkins School for the Blind
175 North Beacon
Watertown, Massachusetts 02172

Produces Perkins Braillers and other educational aides for visually handicapped pupils.

Association of Instructional Resource Centers
for the Visually Handicapped
Illinois Office of Education
100 North First Street
Springfield, Illinois 62777

Provides technical assistance on establishment of and securing information for instructional materials centers for the visually handicapped.

Professional Organizations

Association for Education of the Visually
Handicapped
919 Walnut Street, 4th Floor
Philadelphia, Pennsylvania 19107

Council for Exceptional Children
1920 Association Drive
Reston, Virginia 22091

Professional Journals

Exceptional Children, Council for Exceptional Children, 1920 Association Drive, Reston, Virginia 22091

Fountainhead, Association for Education of the Visually Handicapped, 919 Walnut Street, Fourth Floor, Philadelphia, Pennsylvania 19107

International Journal for the Education of the Blind, Association for Education of the Visually Handicapped, 919 Walnut Street, Fourth Floor, Philadelphia, Pennsylvania 19107

The New Outlook for the Blind, American Foundation for the Blind, 15 West 16th Street, New York, New York 10011

The Sight Saving Review, National Society for the Prevention of Blindness, 79 Madison Avenue, New York, New York 10016

VISUALLY IMPAIRED: ASSESSMENT

Much concern arises over the appropriateness of tests for the blind and partially sighted. Many tests have been standardized only on the sighted. Tests, then, need to be selected wisely, used with special considerations, adapted if necessary, and interpreted cautiously.

Tests of Intelligence/Learning Ability

. The Perkins-Binet Tests of Intelligence
  - (ages 3 - adult) Form U for usable vision; Form N for non-usable vision.

. Wechsler Scales (QPPSI, WISC-R, WAIS)
  - (ages 2 1/2 - adult) Verbal section only for blind; selected subtests of the performance section can be used with some partially sighted.

. Blind Learning Aptitude Test (BLAT)

. Stanford - Binet Intelligence Scale
  - (ages 2 - adult) For totally blind, only the verbal items may be given and scored cautiously; for partially sighted, the entire test may be given but scored and interpreted cautiously.

Achievement Tests

. Stanford Achievement Tests
  - (primary grades - high school) Large print and braille editions.

. Wide Range Achievement Test
  - K - college) Large print available for partially sighted.

. Peabody Individual Achievement Test
  - (K - high school) Norm tables have questionable use. Print somewhat large than average.

. Slosson Oral Reading Test
  - (K - 10) Word recognition skills only in large print/braille. Norms are not usable.

. Spache Diagnostic Reading Scales, Large Print and Braille
  - (1 - high school) Norms are not usable for visually impaired but diagnostic information can be obtained.

. Woodcock Reading Mastery Test
  - (K - high school) Larger than normal print for partially sighted but norms have questionable utility.

. Key Math Diagnostic Test
  - (K - high school) Most sub-tests are usable with the partially sighted; however, the norms have questionable utility.

Other Tests of Educational Relevance

. Boehm Tests of Basic Concepts
  - (Raised line adapted for the blind) Pre-school and primary; tactual test which measures many concepts necessary for school readiness.

. Developmental Test of Visual Motor Integration
  - (ages 2 - 15) For use with partially sighted.

. Bender Visual Motor Gestalt Test
  - (ages 5 - 11) For use with partially sighted.

. Wepman Auditory Discrimination Test
  - (ages 4 - 8) Partially sighted and blind.

. Roughness Discrimination Test
  - For use with blind subjects as a measure of Braille readiness.

. Body Image of Blind Children Screening Test
  - Use with blind children to measure knowledge of parts and movements of the body.

Tests of Social Maturity

. Maxfield Buchholz Social Maturity Scale for Blind Pre-school Children
  - (ages 0 - 6 years)

. Overbrook Social Competency Scale
  - (age 6 - adult) An upward extension of the Maxfield-Buchholz.

. Vineland Social Maturity Scale
  - (ages 0 - adult) A measure of social development standardized on sighted subjects; the norms are not appropriate for the blind or visually impaired, but estimates of social competence are possible.

Additional Reference

. Measures of Psychological, Vocational, and Educational Funtioning in the Blind and Visually Handicapped, American Foundation for the Blind: New York, 1976, authored by G. Schale and R. Schrur.

North Carolina Competency Test

The North Carolina Competency Test is a basic skills test designed to measure a student's knowledge of reading and mathematics. Since passing both the reading and the mathematics portions of the test is one of the criteria for earning a high school diploma, it is essential that no visually impaired student be preemptively excluded from testing.

Standarized testing procedures for exceptional children require that test modifications and administrative procedures be developed and be implemented in such a way as to assure that individual needs are met and at the same time maintain sufficient uniformity to fulfill the purpose of competency testing. The North Carolina Competency Testing Program provides the following procedural modifications.

- Braille edition
- Large-print edition
- Audio-cassette tape edition
- Answers recorded by proctor
- Extended time test
- Test environment
- Instructions given in sign language (video tape edition available)
- Student marks responses in test booklet
- Administration to hospitalized or homebound students

PUBLISHING FOR THE BLIND

The first schools for the blind were established in the United States in the early 1830's. Then, as now, one of the greatest needs was for an ample supply of books and special apparatus for instructional purposes. The relatively small number of the blind, and the specialized nature of publishing books for their use, makes production costs so high that the printing of these materials cannot be undertaken as a commercial enterprise.

To meet this need, the American Printing House for the Blind was founded in 1858 as the central, national printing house for the blind. Today, it is the oldest national agency for the blind in the United States and the largest publishing house for the blind in the world. In the beginning, all materials were published in embossed print. Today, not only does the Printing House supply Braille books and magazines of all types, but Talking Books (on phonograph records, flexible disc, and cassettes) for the four out of five blind people who cannot learn to read Braille. We also produce large type books for the visually handicapped, and special aids such as slates, braille-writers, dissected relief maps, relief globes, preschool aids and electronic equipment. Approximately 100 periodicals, including the Reader's Digest and Newsweek are published in Braille and recorded editions.

As the official schoolbook printery, the Printing House provides each year, through the Federal Act "To Promote the Education of the Blind," approximately $2,000,000 worth of educational materials for the over 25,809 blind children being educated in the schools and classes for the blind throughout the United States and its territories. In addition, approximately $4,000,000 worth of products are distributed to the blind agencies providing materials for the blind and physically handicapped. In all, over $6,000,000 worth of literature and materials are published, manufactured and distributed on a non-profit basis each year for the benefit of the blind and physically handicapped.

For further information write to:

AMERICAN PRINTING HOUSE
FOR THE BLIND
1839 Frankfort Avenue
Louisville, Kentucky 40206

BRAILLE ALPHABET AND NUMBERS USED BY THE BLIND

Close your eyes and read this with your fingers.

a	b	c	d	e	f	g
1	2	3	4	5	6	7
h	i	j	k	l	m	n
8	9	0				
o	p	q	r	s	t	u
v	w	x	y	z	,	˜.

Capital sign Number sign ? •

The Braille System is comprised of signs formed by the use of all the possible combinations of 6 dots numbered and arranged thus:

1 4
2 5
3 6

Letters are capitalized by prefixing dot 6. The first ten letters preceded by the number sign represent numbers. Punctuation marks are formed in the lower part of the cell.

In addition to ordinary print the Braille System provides for the writing of foreign languages, musical scores, mathematical and chemical notations, and other technical matter.

T h i s i s

LARGE PRINT

Children with some residual vision are sometimes able to do all or a part of their work with their eyes. This is a sample of the 18-point type which is used in most of our regular run large type textbooks. Textbooks are also reproduced in large type by the short-run process. The point size in short-run books varies depending on the size of the original copy.

The American Printing House for the Blind

INCORPORATED

1839 FRANKFORT AVENUE

LOUISVILLE, KENTUCKY 40206